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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 866,538	05 24 2001	Roger Y. Tsien	REGEN1530-2	4548

20995 7590 01 16 2003

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EXAMINER

KAM, CHIH MIN

ART UNIT PAPER NUMBER

1653

DATE MAILED: 01 16 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,538

Applicant(s)

IGEL ET AL.

Examiner

Chih-Min Kam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 88-153 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

In response to the Office Action, mailed September 30, 2002 (Paper No. 10), applicants elect Invention of Group II, claims 27-42 with traverse in Paper No. 12, filed November 4, 2002. Applicant has cancelled claims 1-87 and added new claims 88-153, which are directed to polynucleotides, however, claims 88-153 are found to contain more than one invention, thus, are restricted in this Office Action.

I. Restriction to one of the following inventions is required under 35 U. S. C. 121:

I. Claims 88-110, 128, 134 and 138, drawn to a polynucleotide encoding a non-oligomerizing tandem fluorescent protein, wherein the non-oligomerizing tandem fluorescent protein comprises a first monomer of a fluorescent protein operatively linked to at least a second monomer of the fluorescent protein; a vector comprising the polynucleotide, a host cell comprising the polynucleotide, and a kit comprising at least one non-oligomerizing tandem fluorescent protein, classified in class 536, subclass 23.1, and class 435, subclasses 320.1 and 325.

II. Claims 111-121, 129, 135 and 139, drawn to a polynucleotide encoding a tandem non-oligomerizing fluorescent protein, wherein the tandem non-oligomerizing fluorescent protein comprises a) a donor, comprising a first fluorescent protein, b) an acceptor, comprising a second fluorescent protein, c) a peptide linker, wherein the first fluorescent protein and the second fluorescent protein are different, and wherein at least the first fluorescent protein or the second fluorescent protein is a non-oligomerizing tandem fluorescent protein; a vector comprising the polynucleotide; a host cell comprising the polynucleotide;

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and a kit comprising at least one polynucleotide, classified in class 536, subclass 23.1, and class 435, subclasses 320.1 and 325.

III. Claims 122, 124, 126, 130, 132, 136, 138, 140, 142, 144, 146, 148, 150 and 152, drawn to a recombinant nucleic acid comprising the polynucleotide encoding a non-oligomerizing tandem fluorescent protein of claim 88, operatively linked to at least a second polynucleotide; a vector comprising the recombinant nucleic acid; a host cell comprising the recombinant nucleic acid; and a kit comprising at least one recombinant nucleic acid or a plurality of different polynucleotides, classified in class 536, subclass 23.4; class 435, subclasses 320.1 and 325; class 424, subclass 192.1.

IV. Claims 123, 125, 127, 131, 133, 137, 139, 141, 143, 145, 147, 149, 151 and 153, drawn to a recombinant nucleic acid comprising the polynucleotide encoding a tandem non-oligomerizing fluorescent protein of claim 111, operatively linked to at least a second polynucleotide; a vector comprising the recombinant nucleic acid; a host cell comprising the recombinant nucleic acid; and a kit comprising at least one recombinant nucleic acid or a plurality of different polynucleotides, classified in class 536, subclass 23.4; class 435, subclasses 320.1 and 325; class 424, subclass 192.1.

Should Invention I be elected, applicant is required to select one fluorescent protein from a specific organism from claims 90 and 93; one specific fluorescent protein sequence identified by a "SEQ ID NO:" from claims 91 and 95; one mutation related to the elected fluorescent protein sequence from claims 92 and 96-98. Applicant is also required to select one specific polypeptide of interest from claim 109. Each fluorescent

protein containing a different amino acid sequence has different chemical property and produces different effect, thus, is a distinct peptide. Each type of polypeptide of interest has different function and utility, thus is patentably distinct. This is not species election. If a fluorescent protein sequence in claim 95 is elected, and the sequence search indicates SEQ ID Nos:4, 6, 8 and 10 have very high sequence homology, then, these amino acid sequences may be rejoined for examination.

Should Invention II be elected, applicant is required to select one specific mutation related to the fluorescent protein sequence from claims 117-121. Each fluorescent protein with different mutation contains different amino acid sequence, has different chemical property and produces different effect, thus, is a distinct peptide. This is not species election.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions or different utilities (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are drawn to nucleic acids that would have different nucleotide sequences, different modes of operation and different effects. For example, the nucleic acid of Invention I encodes a non-oligomerizing tandem fluorescent protein which contains at least two monomers of a fluorescent protein, whereas the nucleic acid of Invention II encodes a tandem non-oligomerizing fluorescent protein which contains two different fluorescent proteins, the nucleic acid of Invention III encodes a fusion protein of a non-oligomerizing tandem fluorescent protein (a homopolymer) and a peptide of interest, and the nucleic acid of Invention IV encodes a

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fusion protein of a tandem non-oligomerizing fluorescent protein (a heteropolymer) and a peptide of interest.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and their recognized divergent subject matter, and because each invention requires different searches but are not co-extensive, examination of these distinct inventions would pose a serious burden on the examiner and therefore restriction for examination purposes as indicated is proper.

In response to the restriction requirement, applicants elect Invention of Group II with traverse regarding the sequence election in Group I. The traversal is on the ground(s) that the fluorescent proteins in the invention are monomeric fluorescent proteins and share a common function; and the burden of search can be reasonably minimized by making an election of species requirement (pages 9-10 of the response). This is not found persuasive because the fluorescent proteins of the invention contain different amino acid sequences, have different chemical and physical properties (e.g., different excitation and emission spectra), and produce different effects, thus, they are patentably distinct, even though they are monomeric fluorescent proteins and have similar function. Regarding the burden of search, coexamination of each of the additional sequences would require search of sequences unnecessary for the examination of the elected sequences. For example, if all the fluorescent proteins with various sequences were examined, the amino acid sequences of SEQ ID NOs:2, 4, 6, 8, 10 and 12 and the amino acid sequences against nucleotides would be searched. Therefore,

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coexamination of each of these inventions would require a serious additional burden of search.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

A telephone call was made to Ginger Dreger on January 15, 2003 to request an oral election to the above restriction requirement, but did not result in an election being made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (703) 308-9437. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low, Ph. D. can be reached on (703) 308-2923. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-0294 for regular communications and (703) 308-4227 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

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Chih-Min Kam, Ph. D. *CMK*
Patent Examiner

January 15, 2003

Christopher S. Low
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